



# GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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Asiatic Pines



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MISSOURI  
BOTANICAL  
GARDEN

*Linum usitatissimum* L.

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*Pinus resinosa*

C. P. Austin gathers it near Octato, Green Bay, Wisco. —  
He says that judging from the naked spaces on the branches being  
male flowers, of which 5-6 are noted, the leaves must  
persist for 6 years.

Dr Parry finds it on St Croix River Minnesota



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\*\* Male flowers in spikes, ~~more or less close~~ the cup-like scales more or less close or imbricated; the two lateral (or superior) sepals longest in the much compressed bud and carinate. — The material collected is scarcely sufficient for a satisfactory identification and definition of these species.

2. *A. vaginatum*, Eichl. Rather stout, 2-3 inches high; male spikes not closely imbricated, the flowers a line long and a little shorter than the joints, the spike 6-10-jointed or less, usually 6-10 lines long, a line broad before expansion; pistillate spikes 2-7-jointed,  $\frac{1}{2}$ -1 line broad, at first imbricated, the obtuse teeth usually equaling or exceeding the stigma; mature fruit  $\frac{1}{2}$  lines long. — <sup>Martius'</sup> Flora Brasil., fasc. XLIV., p. 106, t. 31, 3, fig. 1, 3-5.

Eichler identifies, probably correctly, the *Viscum* ~~more northern~~ *vaginatum*, HBK., with ~~forms of~~ *A. cryptopodium*, Engelm., <sup>with others</sup> <sup>(L.C.)</sup> more northern forms included by Dr. Engelm. under his species *A. campylopodium* and *cryptopodium*. The plant above described seems to range from Oregon to Southern California, occurring on *Pinus Sabiniana* and *pondrosa*, *Abies grandis* and *Juniperus occidentalis*, <sup>Engelm. annis</sup> *A. abietinum*, Proc. Am. Acad., VII, p. 401, is apparently the same.



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# Piri Shih'ae

P. longifolia <sup>tops</sup> Dents few (on dorsal side, towards the corners) ~~totties~~,  
~~stems~~ — or many well-richt bobs in Ht and Phil. —  
or many, all around, like in Hooker's & Thompson's or none  
at all; hypodium strongly developed in bunches around  
whole leaf — <sup>on my plant</sup> bracts large, very strong, pointed  
involucrum of male fl. not seen, R. large  $1\frac{1}{4}$  inch by,  
anthers large in size, and  $\frac{3}{4}$  in wide, strongly  
fringed - dent'ated.

A form in H. Ohi stand, labeled well & 665 has very  
large anthers, but the corolla is very slightly decurved, and  
the leaves contain only traces of hyponemally. Such very  
small, Dorsal. - leaves more like *Khasia*, but anthers Dorsal.

D. Khasia leaves with 2 ducts, dried, near the edge.  
hypocotyl very slight and only in the corners: Male  
flower pink by slender; involucle of 13-16 scales; exterior  
half as long as inner, or less; scales gradually larger, upper pubescent,  
anthers  $\frac{3}{4}$  line long; out set  $\frac{1}{2}$  line wide, nearly entire.

*P. hispida* <sup>Leaves</sup> ~~sparsely~~ <sup>dark</sup> <sup>of</sup>   
 ~~sparsely~~ <sup>the corners and</sup> <sup>detritus</sup>   
 ~~hypodermis~~ <sup>under</sup> <sup>the epidermis</sup>; <sup>the</sup> <sup>cells</sup> <sup>with</sup> <sup>heat</sup> -  
 ~~whole~~ <sup>fl.</sup> <sup>root</sup> <sup>rich</sup> <sup>long</sup>; <sup>woodland</sup> <sup>soils</sup> about 8 -  
 <sup>out</sup> <sup>per</sup> <sup>more</sup> <sup>than</sup> <sup>half</sup> <sup>as</sup> <sup>long</sup> <sup>as</sup> <sup>inner</sup> <sup>ones</sup>.  
 <sup>anthers</sup> <sup>less</sup> <sup>the</sup> <sup>1</sup> <sup>in</sup> <sup>long</sup> <sup>and</sup> <sup>on</sup> <sup>the</sup> <sup>1/2</sup> <sup>wide</sup> <sup>1</sup>  
 <sup>reaching</sup> <sup>almost</sup> <sup>to</sup> <sup>the</sup> <sup>base</sup> <sup>of</sup> <sup>the</sup> <sup>petiole</sup> <sup>1</sup> <sup>detritus</sup> <sup>1</sup>  
 <sup>very</sup> <sup>near</sup> <sup>to</sup> <sup>Khasia</sup> <sup>by</sup> <sup>the</sup> <sup>isodiam</sup>

MISSOURI BOTANICAL GARDEN  
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The logo consists of a stylized, symmetrical plant or flower design, possibly a lily, rendered in white against a dark background. The design features a central vertical axis with broad, petal-like shapes branching outwards in a circular pattern.

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*Pinus sylvestris*

Affinities

*P. densiflora*: leaves with numerous periph. dots, mostly surrounded by hypoderm cells, also some cells within sheath — hypoderm rarely absent wanting (<sup>native</sup> all I cult wld species) — flowers <sup>only</sup> <sup>2nd</sup> <sup>3rd</sup> <sup>4th</sup> <sup>5th</sup> <sup>6th</sup> <sup>7th</sup> <sup>8th</sup> <sup>9th</sup> <sup>10th</sup> <sup>11th</sup> <sup>12th</sup> <sup>13th</sup> <sup>14th</sup> <sup>15th</sup> <sup>16th</sup> <sup>17th</sup> <sup>18th</sup> <sup>19th</sup> <sup>20th</sup> <sup>21st</sup> <sup>22nd</sup> <sup>23rd</sup> <sup>24th</sup> <sup>25th</sup> <sup>26th</sup> <sup>27th</sup> <sup>28th</sup> <sup>29th</sup> <sup>30th</sup> <sup>31st</sup> <sup>32nd</sup> <sup>33rd</sup> <sup>34th</sup> <sup>35th</sup> <sup>36th</sup> <sup>37th</sup> <sup>38th</sup> <sup>39th</sup> <sup>40th</sup> <sup>41st</sup> <sup>42nd</sup> <sup>43rd</sup> <sup>44th</sup> <sup>45th</sup> <sup>46th</sup> <sup>47th</sup> <sup>48th</sup> <sup>49th</sup> <sup>50th</sup> 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Dr Geo. J Engleman

MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS

Dear Sir:

Will you kindly inform me what work on "Medical Botany" is best adapted to the wants of a student of Botany who wishes to give his knowledge a practical turn. I find the ordinary Class Books, (Wood, & Gray,) very meagre and even entirely silent on many Gen Orders, which embrace many important medicinal plants. By complying with request you will greatly oblige

bulk	20	50	90	10	125	15	25	250
weight	55	30	10	5	70	10	10	170
ft	30	25	25	15	20			115
Grain	30	20						50
gross	40	25	15					90
fine	25	20						85
last	25	25						70
bill	70							70
								90
								10.

Yours very Respectfully

M. A. Brown

12281



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*Pseudotsug. douglasii* Con Lvs. cd. 256

tree 8-12-15' x 250-350'

bark

leaves stout as - Con size 8-12" zigzag shoots

male about 5-10"  
stems 1/4 in. thick, cylindrical, pubescent with large loose scales,  
and buds <sup>oblique</sup> ~~long~~ 1/2 in., both scales acute - smooth - hairy,  
no knob or spine.

cones 2-3" (4 in. max)  
~~4 mm down~~

bracts exsert - variable  
scales reflexed - pubescent  
or short

seeds grayish 3 hrs. long very narrow length, broadest at base, only  
cyl. 6-8 mm in largest part f. Ovules only  
widest 4-5 1/2 mm

In Gabriel County, not so long as  
widest below middle



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Parkeri writes, Sept 1879

*Pinus Massoniana* <sup>var.</sup> comes from South China, and is related to *P. Khasia*, perhaps identical with it.

*P. Massoniana* of many collections is a *Thunbergia* and is allied to *P. Laricio*.

*P. densiflora* is allied to *Syloctis*.

*P. Bungeana* and *Gerardiana* are closely allied.

*P. Canariensis* is somewhat similar, but belongs to the *Pineaster* group.

*Gerardianum*: needles 21-22 mill. longue 8-9 mill. late (Parket.)



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~~Var.~~

~~*Pinna pinnata* (L.) H. K. Bowles, Sept 1862 on a volcanic cone  
 in Valley near Mt Shasta — <sup>gravel</sup> ~~pinnata~~, slightly pubescent on  
 young fronds, leaves 7-9 l. long, 0.6-0.7 l. wide — Obovate  
 strongly keeled above with band of 5-6 rows of short ~~above~~  
down below ~~under~~, the keel wider, convex upward,  
 lower sessile and with 2 dots, therefore not *Pattersonii* nor  
*Douglasii*.~~

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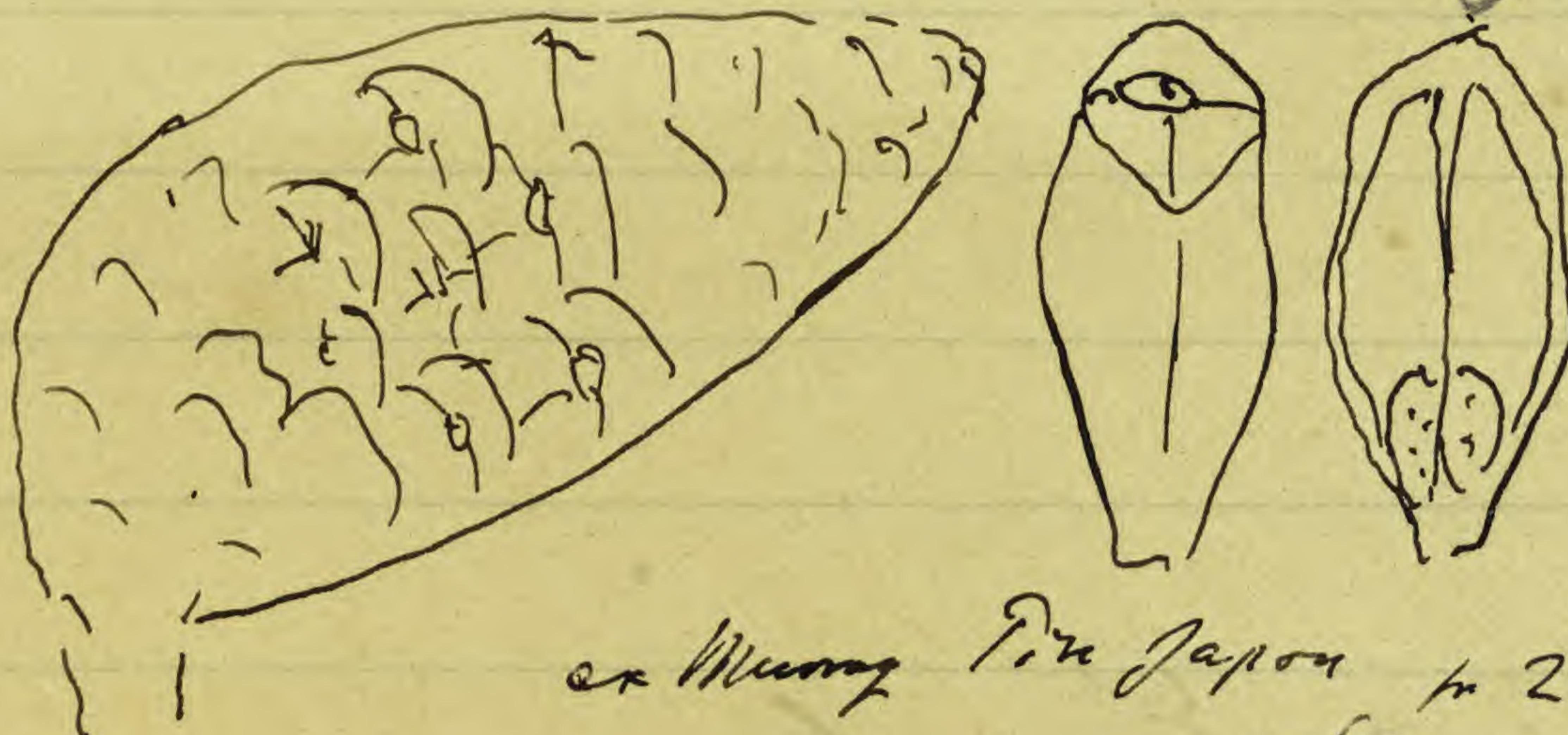
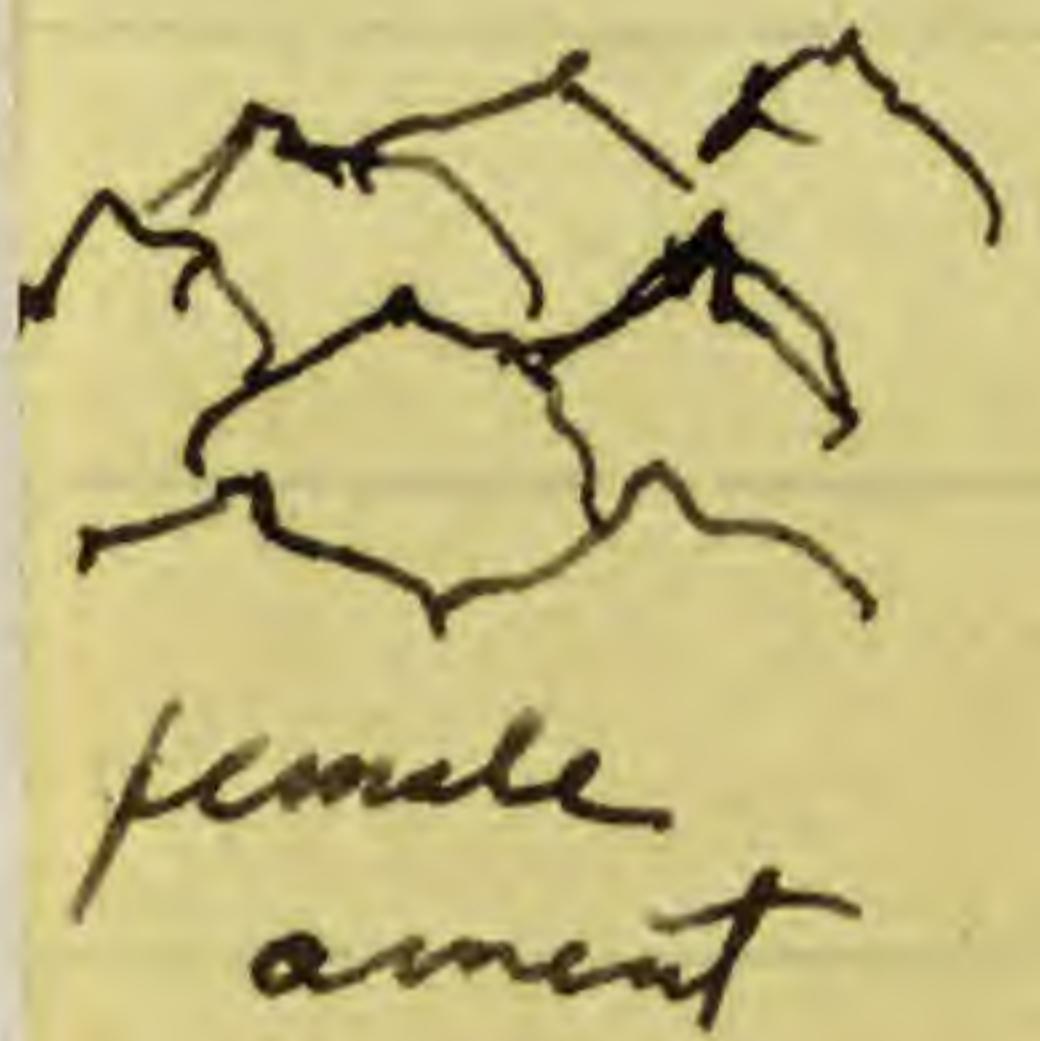
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*Thunbergii* Radlk

*Pinus Mississima* ~~Lambert~~  
S. C. Agnew, non



ex Muong Po Japan n 23

1863



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Dr Engelmann



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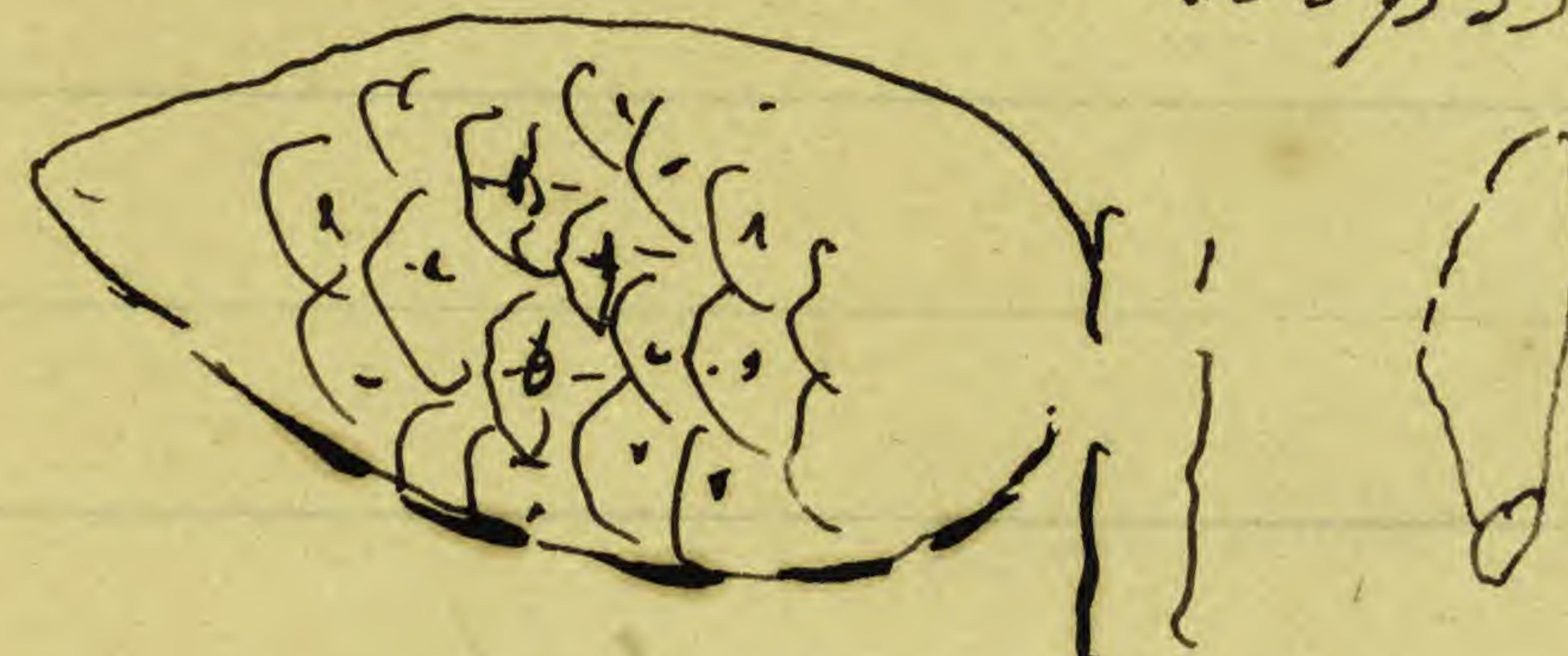
*Pisum sativum* L. & Juss.

ex Murray's *Pisum japonicum*

1863 p 33.



part of ♀ and



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Lloyd



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*Pitcairnia* *Sierrae* Schub. slender long leaves in 2' oval cone,  
6 subt lvs, scales scarcely knobby, ~~flwr.~~ annual spike,  
Heller  
Sept 6 '1869 erect - like Missionia - male and slender, forming globe  
heads 3 and 4 in.

Specimen from the Island of Formosa has the male fl. in spikes 5 and  
knobbs' from Soochow has stouter leaves



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Herb Kew, Sept 6 1869

~~Pinus longiana~~, only seeds, = those of ~~Pinus~~ ~~longiana~~ Thunb., Mr Stock  
Pinus Massoniana Lamb. Japon. Maximowicz. 1862 - ~~descrips~~  
erect fern. annuals, mostly 2'; male annuals about 1.8 feet long,  
short heads. leaves 1-2' falling after 2' growth  
comes short and reflexed.

"*forms brevifolia*" Japon 1861, Maximowicz



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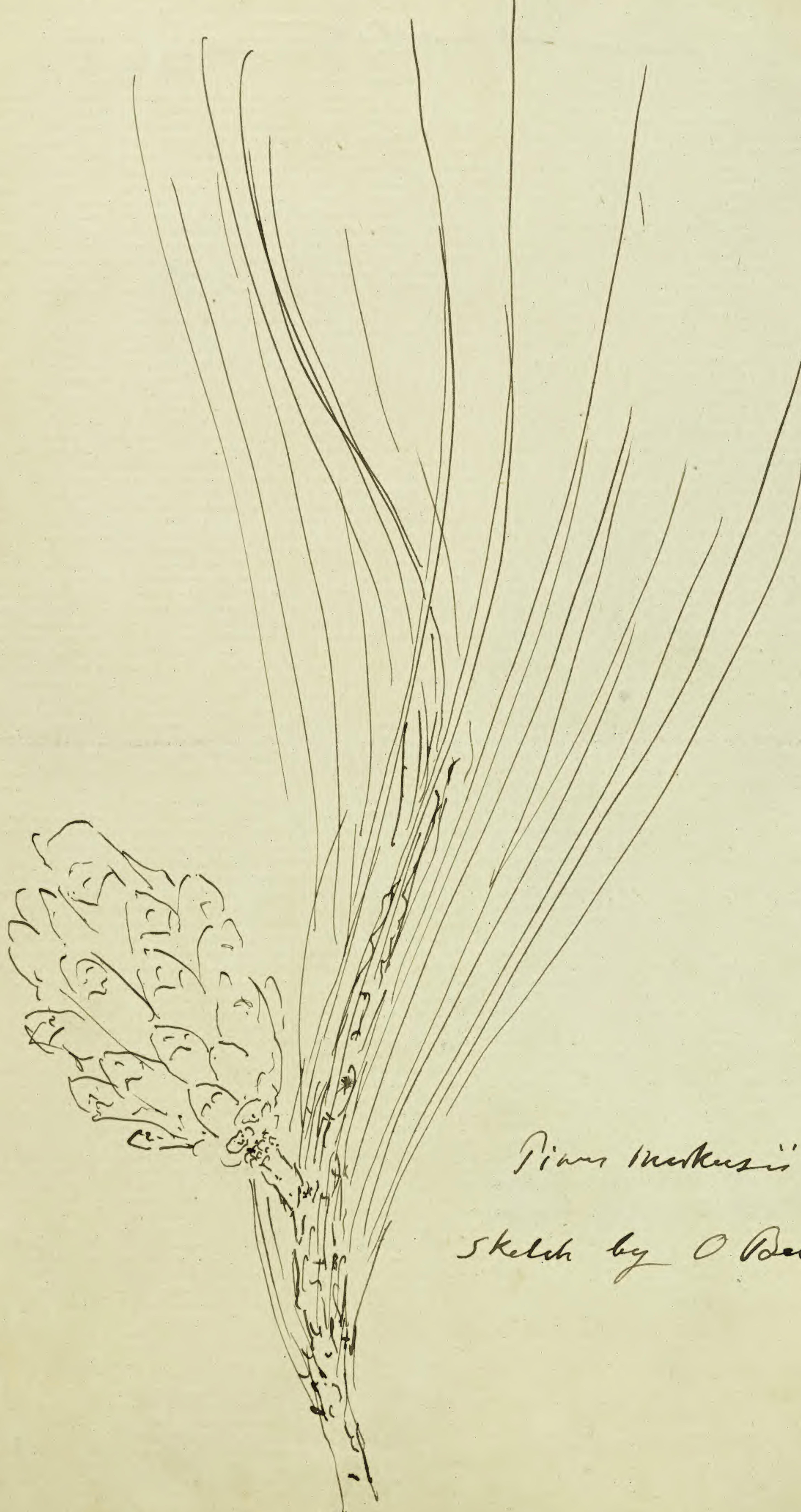


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*Pinus mackenziei*

sketch by O. Beccari

1880



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